CITY OF WARWICK
PURCHASING DIVISION
3275 POST ROAD
WARWICK, RHODE ISLAND 02886
TEL. (401) 738-2000, ext. 6240
FAX (401) 737-2364

SCOTT AVEDISIAN
MAYOR

PATRICIA PESHKA
PURCHASING AGENT

The following notice is to appear on the City of Warwick's website Monday, August 3, 2015. The website address is http://www.warwickri.gov/bids.

CITY OF WARWICK
BIDS REQUESTED FOR

Bid #2016-100 Purchase & Deliver (1) 2015 Combination Single Engine Sewer and Catch Basin Cleaner

Specifications are available in the Purchasing Division, Warwick City Hall, Monday through Friday, 8:30 AM until 4:30 PM on or after Monday, August 3, 2015. Please note that our office will be closed on Monday, August 10, 2015.

Sealed bids will be received by the Purchasing Division, Warwick City Hall, 3275 Post Road, Warwick, Rhode Island 02886 up until 10:00 AM, Monday, August 17, 2015. The bids will be opened publicly commencing 10:00 AM, on the same day in the Lower Level Conference Room, Warwick City Hall.

Awards shall be made on the basis of the lowest evaluated or responsive bid price. Please note that no bids can be accepted via email or fax.

Individuals requesting interpreter services for the hearing impaired must notify the Purchasing Division at 401-738-2000, extension 6241 at least 48 hours in advance of the bid opening date.

Original Signature on File
Patricia Peshka
Purchasing Agent

PLEASE SUBMIT THIS PAGE WITH YOUR BID

Acknowledgement of Addendum (if applicable)

Addendum Number	**Signature of Bidder**
_____	_____
_____	_____

COMPANY NAME: _____

COMPANY ADDRESS: _____

_____

BIDDER'S SIGNATURE: _____

BIDDER'S NAME (PRINT): _____

TITLE: _____ TEL. NO.:_____

EMAIL ADDRESS: _____*

*Please include your email address. Future bids will be emailed, unless otherwise noted.

II. AWARD AND CONTRACT:

The CITY OF WARWICK, acting as duly authorized through its Purchasing Agent/Finance Director/Mayor (delete if inapplicable), accepts the above bid and hereby enters into a contract with the above party to pay the bid price upon completion of the project or receipt of the goods unless another payment schedule is contained in the specifications. All terms of the specifications, both substantive and procedural, are made terms of this contract.

DATE: _____ _____

BID #2016-100 Purchasing Agent

CERTIFICATION and WARRANT FORM*

This form must be completed and submitted with sealed bid.
Failure to do so will result in automatic rejection.

Any and all bids shall contain a certification and warrant that they comply with all relevant and pertinent statues, laws, ordinances and regulations, in particular, but not limited to Chapter 16-Conflicts of Interest, of the Code of Ordinances of the City of Warwick. Any proven violation of this warranty and representation by a bidder at the time of the bid or during the course of the contract, included, but not limited to negligent acts, either directly or indirectly through agents and/or sub-contractors, shall render the bidder's contract terminated and the bidder shall be required to reimburse the City for any and all costs incurred by the City, including reasonable attorney fees, to prosecute and/or enforce this provision.

_____ _____
Signature Date

_____
Company Name

_____
Address

_____
Address

***This form cannot be altered**

CITY OF WARWICK
NOTICE TO BIDDERS

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Single Engine Sewer and Catch Basin Cleaner

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If you received this document from our homepage or from a source other than the City of Warwick Purchasing Division, please check with our office prior to submitting your bid to ensure that you have a complete package. The Purchasing Division cannot be responsible to provide addenda if we do not have you on record as a plan holder.

The opening of bids shall be in the order established by the posted agenda and the agenda shall continue uninterrupted until completion.

Once an item has been reached and any bids on that item has been opened, no other bids on that item will be accepted and any such bid shall be deemed late.

The contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap for any position for which the employee or applicant is qualified and that in the event of noncompliance the City may declare the contractor in breach and take any necessary legal recourse including termination or cancellation of the contract.

A bidder filing a bid thereby certifies that no officer, agent, or employee of the City has a pecuniary interest in the bid or has participated in contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other bidder for the same call for bids, and that the bidder is competing solely in his own behalf without connection with, or obligation to, any undisclosed person or firm.

All bids should be submitted with one (1) original and one (1) copy in a sealed envelope. The exterior of the envelope shall be plainly marked to include: *YOUR COMPANY NAME* and Bid #2016-100 Purchase and Deliver (1) 2015 Combination Single Engine Sewer and Catch Basin Cleaner. Bids received prior to the time of the opening will be securely kept, unopened. No responsibility will be attached to an officer or person for the premature opening of a bid not properly addressed and identified. No bids shall be accepted via facsimile or email.

Should you have any questions, please contact Mathew Solitro, Warwick Sewer Authority, 125 Arthur Devine Blvd., Warwick, RI at 401-468-4721.

All bids should be written in ink or typed. If there is a correction with whiteout, the bidder must initial the change.

Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after it is opened.

Any deviation from the specifications must be noted in writing and attached as part of the bid. The Bidder shall indicate the item or part with the deviation and indicate how the bid will deviate from specifications.

The contractor must carry sufficient liability insurance and agree to indemnify the city against all claims of any nature, which might arise as a result of his operations or conduct of work.

The IRS Form W-9 attached should be completed and submitted with the bid if the bidder falls under IRS requirements to file this form.

Prices to be held firm one (1) year from date of award. Term contracts may be extended for one (1) additional term upon mutual agreement unless otherwise stated.

Per Section 56-5(f), Post-Bid Award Requirement. When a bid is awarded to a corporation, limited liability company or other legal entity, prior to commencing work under the awarded bid, that corporation, company or legal entity shall provide to the Purchasing Agent a Certificate of Good Standing dated no more than thirty (30) days prior to the date upon which the bid award was made.

The City is exempt from the payment of the Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30, Paragraph I, as amended.

The successful bidder must comply with all Rhode Island Laws, applicable to public works projects, including, but not limited to provisions of Chapter 13 of Title 37 of the Rhode Island General Laws, pertaining to prevailing wage rates, and all other applicable local, state and federal laws.

The Purchasing Agent reserves the right to reject any and all bids, to waive any minor deviations or informalities in the bids received, and to accept the bid deemed most favorable to the interest of the City.

The City reserves the right to terminate the contract or any part of the contract in the best interests of the City, upon 30-day notice to the contractor. The City shall incur no liability for materials or services not yet ordered if it terminates in the best interests of the City. If the City terminates in the interests of the City after an order for materials or services have been placed, the contractor shall be entitled to compensation upon submission of invoices and proper proof of claim, in that proportion which its services and products were satisfactorily rendered or provided, as well as expenses necessarily incurred in the performance of work up to time of termination.

No extra charges for delivery, handling or other services will be honored. All claims for damage in transit shall be the responsibility of the successful bidder. Deliveries must be made during normal working hours unless otherwise agreed upon.

All costs directly or indirectly related to the preparation of a response to this solicitation, or any presentation or communication to supplement and/or clarify any response to this

Solicitation, which may be required or requested by the City of Warwick shall be the sole responsibility of and shall be borne by the respondent.

If the respondent is awarded a contract in accordance with this solicitation and the respondents bid or response and if the respondent fails or refuses to satisfy fully all of the respondents obligations thereunder, the City of Warwick shall be entitled to recover from the respondent any losses, damages or costs incurred by the City as a result of such failure or refusal.

The City reserves the right to award in part or full and to increase or decrease quantities in the best interest of the City.

Any quantity reference in the bid specifications are estimates only, and do not represent a commitment on the part of the City of Warwick to any level of billing activity. It is understood and agreed that the agreement shall cover the actual quantities ordered during the contract period.

The City reserves the right to rescind award for non-compliance to bid specifications.

The successful bidder must adhere to all City, State and Federal Laws, where applicable.

CITY OF WARWICK
SEWER AUTHORITY

INTENT

The intent of this specification is to provide for the purchase or lease of one (1) new and unused single-engine combination sewer and catch basin cleaner used for removing all debris commonly found in catch basins/storm lead structures and sanitary sewer lines/manhole structures using a front mounted operating station. The unit shall consist of a Positive Displacement (PD) Blower vacuum system, a hydraulically driven high pressure water pump, an enclosed sealed body for storage of collected debris and equipped with a self-contained water supply as the source for the water pump system. The unit shall have the capability of operating both vacuum and water systems simultaneously at full operating speeds continuously. (Submit horsepower requirements of all systems on unit).

EQUIVALENT PRODUCT

Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Decisions of equivalency will be at the sole interpretation of the Purchasing Agent and the Warwick Sewer Authority.
Bidder shall demonstrate a reasonable likeness of the equipment being offered within a reasonable time of request. Equipment demonstrated shall be equipped with all accessories and components required in this specification to ascertain equivalence.
A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence. Original manufacturer's brochures of the proposed unit are to be submitted with the proposal.

BIDDER REFERENCES

To ensure adequate local availability of parts and competent service from experienced suppliers, bids are preferred from local vendors who have sold and serviced at least 30 units of same manufacturer within service and submissions should include contacts with phone numbers.

SERVICE AND SUPPORT

Location of warranty service center and amount of inventory shall be noted, which may be verified and inspected.
Amount of OEM parts at this facility: $_____
Years of servicing equipment being bid: Years _____
Number of factory qualified service technician: _____

GENERAL

The specification herein states the minimum requirements of the. All bids must be regular in every respect. Unauthorized conditions, limitations, or provisions shall be cause for rejection. Any bid not prepared and submitted in accordance with the bid

document and specification, or any bid lacking sufficient technical literature to enable the WSA to make a reasonable determination of compliance to the specification will be considered "non-responsive" and grounds for rejection.

SUBFRAME

The equipment shall be of modular design consisting of vacuum system, water tanks system, debris body and drive system.
A sub frame shall be fabricated to the exact dimensions of the truck chassis for mounting of modular components.
All components of the module shall attach to the sub frame and not directly to the chassis.
Sub frame shall be designed to ASME standards for maximum applied loads, chassis frame movement and even distribution of weight to the chassis and suspension.
Sub frame shall be continuous and uninterrupted from back of cab to end of frame.

DEBRIS BODY

Efficiency of air movement through debris body will be measured for minimal restriction as measured by vacuum pressure gauge while operating blower at full speed. Pressure drop throughout entire system (from 8" hose inlet to blower inlet) including specified filtration and blower protection devices, shall be no greater than 3" hg as measured at blower.
The body shall be cylindrical having a minimum usable liquid capacity of 15 cubic yards.
The body shall be capable of high dump height of 60". Dump height of 60" must be achieved without the use of scissor lift mechanism.
The debris storage body shall be constructed with a minimum 1/4" corrosion and abrasion resistant Ex-Ten steel.
The debris storage body shall have a minimum yield point of 50,000 PSI and a minimum tensile strength of 70,000 PSI.
Body shall have a rear door that is hinged at the top and is equipped with a replaceable neoprene type seal. Adjustable for periodic compensation of door seal wear.
Dual outward mounted rear door props shall be included as standard to prevent operator from entering door swing path when engaging rear door prop.
For optimal particulate separation, vacuum shall be drawn from separate ports in the top of the debris body.
Body shall be dumped by raising the body to a 50 degree angle utilizing a forward mounted, double acting hydraulic dump cylinder.
Dump controls, accessory controls, e-stop control shall be provided at a central curb side location directly behind the cab of the truck.
For stability and safety, dumping must be accomplished while the pivot point of the body remains fixed to the subframe.
Industrial style rear debris body door shall be flat, and shall open and close hydraulically by cylinders mounted at the top of the body. Door shall open 50 degrees from the fully closed position. Door shall be unlocked, opened, closed, and locked by a failsafe hydraulically activated sequential positive locking system, cam operated by a single hydraulic cylinder, with all controls located behind truck cab, forward of the debris body, so operator is not exposed to sewage when dumping.

Debris body shall have a body flush-out system with a fan-type spray nozzle located in the front wall of the debris body to aid in the flushing of heavy debris. The nozzle shall also utilize two (2) spray nozzles to flush the front most area of the debris body. System must produce a flow of 80GPM. Control valve shall be on the curb side of the unit.
Body shall have a float type automatic shut-off system protecting the Positive Displacement Blower with two (2) 10" stainless steel shut-off balls located in the debris body. Each float ball housing shall be within a non-corrosive slide-out screen assembly and be accessed without the use of tools.
The debris body shall be equipped with a rear door drain to drain off excess liquids while retaining solids and shall include a manually operated 6" knife valve with cam-lock coupler and 25' of lay flat hose having camlock quick connects.
The debris body shall be equipped with a rear door drain at bottom dead center to drain off excess liquids with an internal screen to prevent large solids from passing. A manually operated 6" knife valve with cam-lock coupler and 25' of lay flat hose having camlock quick connects shall be included at this location.
The debris body shall be equipped with a curb side forward mounted body drain to drain off excess liquids while retaining solids and shall include an air-activated 6" knife valve and screen with cam-lock coupler and 10' of lay flat hose.
Four (4) Dual vertical (cyclone) centrifugal separators shall be installed in-line between the debris body and the air mover, two (2) per side for each debris body discharge port. Each dual separator shall include large fallout chamber cleanout door.
For safety, a minimum of five (5) vacuum tubes shall be stored on curbside storage racks to minimize operator exposure to traffic side of unit. These shall include quick release retainer handles (no bungees or clamps).
A curb-side, folding 3-pipe rack shall be provided, constructed of steel tubing, spring assisted. Which shall also include quick release retainer handles (no bungees or clamps).
A street-side, folding 3-pipe rack shall be provided, constructed of steel tubing, spring assisted. Shall include quick release retainer handles (no bungees or clamps).
Two (2) Pipe Storage Racks Curbside waist level and two (2) on rear door with quick releases.
A stainless steel micro-strainer (to 30 microns) shall be provided prior to the blower inlet, with three (3) removable cartridge style screens and bottom drain port.
A splash shield shall be mounted around the lower 60% of door opening to direct liquid and debris away from the chassis. Shield shall be minimum 10" deep bolted assembly with no openings.
A lubrication manifold system shall be provided to allow ground level greasing of boom lift and swing cylinders, float level indicator, top rear door hinges and debris body hoist cylinder pins.
A 6" valve with 3" vent to atmosphere, electrically activated, air operated valve debris body vacuum relief system shall be located in the inlet of the vacuum system to allow the venting of the tank and relieve vacuum at the debris intake hose. Three (3) Kunkel relief valves shall be included.
A debris inlet deflector distributing load evenly in debris body shall be included.

WATER TANKS

The water tanks shall be manufactured from a non-corrosive material to prevent rust yet still provide for maximum strength.

The water tank material shall require no internal coating and shall be repairable if patching is required.
The water tanks shall be easily removed from the subframe to provide complete access to the truck chassis for maintenance purposes.
The water tanks shall be adequately vented and connected to provide complete filling.
The water tanks shall be totally separate from the debris tanks and provide no structural support.
The water tanks shall share any common walls with the debris tanks to prevent corrosion.
The water tanks shall come equipped with an anti-siphon device and 25' of hydrant fill hose and fittings.
The water tanks shall carry a 10-year warranty against corrosion or cracking.
All water tanks shall be fully baffled to form maximum compartment storage of 150 gallons for each compartment (has specified for the stability of the vehicle when turning and stopping and for safety of personnel). Exceptions of requirement shall be explained in detail accompanied with detailed engineering drawings.
The water tank shall be located for the lowest possible center of gravity while providing 100% gravity flooded intakes to water pump.
Fresh water shall enter the tanks through an in line 6" air gap, all aluminum covered anti-siphon device.
Water level sight tubes of non-yellowing plastic shall be installed on both tanks.
The sides of these water tanks shall not extend more than 48" out from the centerline of the truck chassis.
A fresh water drain system shall be provided to completely drain the fresh water system from one location utilizing a 3-drain port and plug.
A minimum 6" connection between tanks shall be provided.
For stability safety, the water tanks shall not elevate with debris body during dump cycle.
A low water alarm with light at the operator station shall alert operator when water storage has 150 gallons remaining.
An air purge system utilizing the chassis air system shall be provided to assist displacing of residual water out of the high-pressure water system. System shall utilize the truck chassis air compressor to fill a 30-gallon auxiliary air storage chamber with pressure gauge and pressure protection valves to isolate the holding tank from the chassis compressor. System shall be equipped with ball valve and all necessary high pressure piping hoses, couplings and controls.
A 3 in-line "Y" trap strainer shall be located at inlet of water tank fill air-gap.
A 3 in-line "Y" trap Monel stainless steel strainer shall be located between the water cells and water pump.
A 3" Gate Valve shall be provided at water pump.
Water tank must be a certified metered capacity of 1500 gallons. Certification shall be necessary upon delivery.
Water tanks shall be constructed of 1/8" aluminum with baffled compartments maximum 150 gallons each.
An additional water tank sight gauge shall be provided.
Liquid Float Level Indicator shall be provided.

VACUUM/VACUUM DRIVE SYSTEM

Vacuum shall be provided by a positive displacement rotary lobe type blower driven via chassis engine and heavy duty split transfer case direct to the blower.

Interlock safety system shall prevent drive axle from engaging.
A horizontal silencer with rain cap shall exhaust above the cab.
A blower tachometer / hour meter shall be provided.
For most efficient use of horsepower and fuel consumption, full vacuum and/or combination operation shall be approximately 1750 RPM of chassis drive engine.
Blower shall be driven by the chassis engine and shall produce inlet volume of 4500 cfm @ 0" hg @ 2250 rpm, and 3490 cfm @ 18" hg @ 2250 rpm vacuum (Roots 824RCS 18 or equal). Drive engine not to exceed 1760 RPM.
For added protection, the vacuum system shall have three (3) relief valves set at 18" hg, heavy duty horizontal mounted noise muffler, removable and cleanable stainless steel filter screen, and shall be enclosed with a steel cage guard for safety.
Transfer case shall be activated via air shift controls in the truck cab to engage work / road mode.
Blower shall be driven from chassis engine via the transmission drive shafts and heavy duty split shaft transfer case direct to blower, engagement via air-shift clutch control at operator panel.
Blower shall be provided with a horizontal silencer with exhaust above the cab and rain cap protecting the silencer from rain water.
Blower shall draw air from two (2) separate ports in the debris body.
Hydraulic shut off valves shall be provided at the suction, return and filter lines to permit servicing of the hydraulic system.

VACUUM BOOM SYSTEM

Vacuum hose shall be designed for front operation with hose mounted and stored at front mounted work station. Front mounted location is required for ease of positioning vacuum hose as well as minimizing need for operator to swing hose into traffic.
All connections between debris body and vacuum system will be of the self-adjusting pressure fitting type.
Vacuum hose will remain stationary and not rise with debris body.
Upper debris tube shall consist of an anchored steel tube and elbow.
A sub-frame mounted cab guard shall be mounted behind cab with boom rest cradle.
All vacuum pipes shall be connected to vacuum pick up tube and extension pipes by adjustable over-center quick clamps to join the aluminum flanges on pipes.
One (1) quick clamp for each pipe supplied shall be provided.
Boom pedestal shall be directly mounted to module subframe.
Boom support used for travel mode shall not interfere with access or require removal to tilt hood forward.
A control station shall be equipped with control switches for all directions as well as a safety emergency shut-down button, which shall automatically eliminate power to boom.
The vacuum boom shall have a heavy-duty flexible hose assembly joining the transition pipe to the debris body, and a 70-degree elbow and 5-1/2 heavy duty hose at the suction end of the boom.
Boom shall rotate 180 degrees and shall be operated by an electric over hydraulic system.
Lift and swing movements shall be actuated by hydraulic cylinders.
The horizontal inner steel vacuum tube and inner box beam boom section shall telescope (tube within tube, box beam within box beam) and retract a minimum of 10' without affecting the vertical position of the pick-up tubes, and shall be located at the front work station in its retracted position, providing 324" maximum reach off the longitudinal axis of unit.

Boom shall be fully controlled by a remote push button pendant control station with 25 ft. cable. Controls to include up / down, left / right, in / out boom functions, vacuum relief, e-stop and main power switch.
A joystick for hydraulic control of the boom shall be installed on hose reel front panel.
A removable 4" diameter storage "Post" to stabilize the lower boom hose during transport. Storage device shall not interfere with raising hood.
A cordless remote boom control system equipped to activate boom functions, throttle, water pump on/off, hose reel in/out, hose reel speed, vacuum relief on/off and emergency disengagement e-stop shall be provided.
A detailed engineering drawing must be supplied showing the relationship of the hose reel in relation with the vacuum boom range of motion. Drawing shall show module mounted on chassis, full arc of vacuum hose both retracted and extended, full rotation of arc for hose reel in the extended position and dimension all arc lengths of vacuum boom retracted and extended. Drawing shall highlight intersection areas whereby combination cleaning is possible (within full arc on telescoping boom system).

WATER PUMP AND DRIVE

For most efficient use of horsepower and reduced fuel consumption, high pressure rodder pump shall be hydraulically driven via one (1) load sensing utility pump, one (1) variable displacement pump and one (1) fixed displacement pump.
Hydraulic powered rodder pump via twin variable displacement hydraulic pumps and one (1) fixed displacement utilizing two (2) 10-bolt (power take off's) PTO's.
High pressure water pump shall be rated capable of continuous delivery of 100 GPM at 2500 PSI (submit manufacturer support documentation).
High-pressure water (rodder) pump system shall allow front-mounted controls for operation of three (3) modes: (1) Low flow range 0-22 GPM; (2) medium-flow range, 22-60 GPM / 2500 PSI; and (3) High-flow range: 60 up to 100 GPM / 2500 PSI.
Digital flow meter shall be displayed in front LCD display. Flow meter shall be capable of displaying system flow in all pump operating modes. In addition, a low water alarm shall be provided.
This hydraulic drive system shall allow variation of water pump speed independent of required vacuum drive speed within maximum drive engine speed of 1760 RPM.
Variable flow systems routing water back-to-tank are not considered equal due to additional wear, horsepower and fuel consumption. Any deviation from this drive requirement should have full explanation of horsepower consumption.
Water (rodder) pump shall include smooth and pulsation operation mode feature.
When required to assist nozzle breaking through obstructions, water pump "pulsation mode" shall provide a forward-acting nozzle surge. Pulsation surge wave shall allow nozzle to punch forward 2" to 18" depending on flow dynamics and length of hose in sewer pipe.
Explanation of forward-acting pulsation method shall be submitted with bid.
Water pump location shall provide a flooded gravity suction inlet to eliminate potential cavitations damage.
An oil to water heat exchanger will be provided in the water system to cool all hydraulic fluids on the unit. State horsepower requirement to operate hydraulics at full speed:
The water pump shall provide precise 0-80 GPM controlled flow at variable pressure up to 2500 PSI.

An extreme cold weather recirculation system - minimum 25 GPM via transmission PTO at chassis engine idle speed.
A hydro-pneumatic nitrogen charged accumulator system shall be provided with all control valves, piping and hoses for either continuous flow or jackhammer rodding.
Accumulator shall be a 2.5 gallon capacity and 1400 to 2500 PSI pressure rating.
Two (2) 1/2" high pressure ball valves shall be provided for draining the water pump and flushing sediment from the bottom of the pump.
A nozzle rack accommodating three (3) nozzles shall be provided in curbside toolbox.
The nozzles shall be labeled on storage rack for pipe size/flow and application.
System shall be relieved to protect operator.
Handgun shall be supplied that allows for changing of flow pattern from a fine mist to a steady stream.
Handgun shall come equipped with quick connect couplers.
An additional 1" water relief valve shall be provided.
A mid-ship quick disconnect handgun couplers shall be provided.
Front and rear quick disconnect handgun couplers shall be provided.
A water pump hour meter shall be provided.

HOSE REEL

Hose reel assembly shall be direct frame mounted.
Hose reel assembly shall be mounted on an independent frame that can be removed from brackets attached permanently to front of main truck frame members.
Reel will be manufactured out of 1/4" spun steel for added structural strength and shall require no internal or external reinforcements that could damage rodder hose.
Hose reel shall be driven by adjustable gear reduction chain and sprocket assembly.
Hose reel shall operate at full rotational speed while chassis engine is at idle.
Hydraulic Telescoping Rotating Hose Reel - 800' capacity of 1" hose shall be provided.
The front mounted hose reel shall telescope 15" forward down centerline of truck.
Entire reel assembly shall rotate 270 degrees on a large diameter ball bearing.
Hose reel shall include a dual locking device to positively lock reel in any position across operating range.
The hose reel shall rotate about the reel assembly centerline so the reel shall never extend beyond the truck width. Reel coverage diagram shall be submitted with bid.
Controls shall accessible on both sides of the hose reel, allowing operator to work at either side of unit for safety purposes.
600' x 1" Piranha Sewer Hose / 2500 PSI shall be provided
An automatic hose level wind scroll device shall be supplied. An air-cylinder actuated pinch-roller shall exert downward pressure across full width of reel to retain hose on reel when encountering nozzle blockages.
An air-cylinder actuated pinch-roller shall exert downward pressure across full width of reel to retain hose on reel when encountering nozzle blockages.
A hose footage counter shall be supplied to indicate the amount of hose travel within pipe.
Digital footage counter displaying absolute and relative footage values shall be provided. System must be capable of resetting relative value to ensure operator safety., Accuracy to within one percent of actual distance, large easy to read LCD screen, large keypad with sealed membrane switches that are easily activated,NEMA-4 moisture sealed enclosure, solid state circuitry, dimensions: 5 5/8 X 3 3/8 X 3/16, LCD display area: 3.0 X 2.2

WASHDOWN EQUIPMENT

A spring retractable storage reel for handgun hose shall be provided to allow the operator to deliver water to area served by pick up hose and to the inside of the debris body for clean out. Reel shall be mounted midship on curbside, equipped with 1/2 x 50' 2000 PSI hose. An additional 35' of 1/2" hose with quick disconnect couplers shall be supplied loose.

Hand sprayer with adjustable spray-pattern to be provided with trigger-style gun.

FRONT OPERATING STATION AND CONTROLS

Primary operator station will be located at front of truck on right curb side of hose reel. All front operator controls shall be accessible while operating either front or rear side of reel assembly. All operations to either side of unit shall position operator in front of vehicle affording protection from oncoming traffic.

Station shall include truck engine throttle, water pump (on/off), water pump mode, water pump flow meter, hose reel control valve (forward / reverse), adjustable hose reel speed control, oil dampened water pressure gauge, boom controls, digital water pump flow meter, and low water warning light.

Tachometer and hour meter for chassis engine provided at control station shall be provided.

Tachometer and hour meter for blower shall be provided at control station shall be provided.

All Hydraulic Functions - Color Coded, Sealed Electric/Hydraulic NEMA 4 switches shall be provided.

Blower Engagement/Vacuum Relief - Sealed Electric/Air NEMA 4 Switch shall be provided.

Water pump hour meter shall be provided.

PTO hour meter shall be provided.

ELECTRICAL AND SAFETY LIGHTING

The entire system shall be vapor sealed to eliminate moisture damage, "NEMA-4" type or equal.

Vansco Electronic Package: Chassis Tachometer, Blower Tachometer, Operating Mode, PTO Mode, Hydraulic Oil Temperature shutdown, and E-Stop shall be included. E-Stop activation must turn off rodder pump, shutdown PTO A and B, set chassis throttle to idle, and open vacuum relief. E-stop must be located at each operator interface; including front/rear hose reel controls, pendant control, and dump control location. Basic machine functions and both chassis and module diagnostics shall be provided.

All electrical connections shall be void of exposed wires or terminals and should not be painted. Paint process shall be completed prior to installation of wiring.

All wiring shall be color-coded and encased in conduit to scaled terminal boxes with circuit breakers.

All light bulbs shall be shock mounted to eliminate bulb failure.

All other lights required by State and Federal Laws.

Two-piece directional LED 10-strobe-light arrow board shall be mounted on rear door of debris body, with controls mounted in cab.

Handheld, Pistol Grip LED Spot light with rechargeable Lithium Ion battery.

Operator station work lights shall be provided.

Hose reel manhole work lights shall be provided.

Two (2) LED. Boom work lights shall be provided.

Two (2) LED. Work light at midship curbside shall be provided.
Two (2) LED. Rear door work lights shall be provided
FS 6 Light System - All Led System (2 Cab Guard Strobes, 2 Rear Water Tank Mounted Oval Quad Flash Lights, 2 Mid-Ship) shall be provided.
LED. Bumper strobes shall be provided.
Vactor Four Flashing Light Assembly - Two Piece - four (4) 7" Amber Lights shall be provided.
One (1) LED. Lights, Clearance, Back-Up, Stop, Tail and Turn shall be provided.

SAFETY EQUIPMENT

E-stop shall be located at each operator interface location. Standard locations to include: front hose reel, mid-ship curbside dump controls, and wireless controller (if equipped.)
Electrical system controls shall be configured to allow for single point operation only. Upon engagement of controls at specified locations, additional controls shall be disabled.
Electrical system must enable self-check to ensure all switches are in home position prior to critical function enablement. System must "lock out" controls when switch is not in home position.
Rear work lights shall be activated upon engagement of reverse gear.
One (1) Emergency Flare Kit.
One (1) 5# Fire Extinguisher.
7" dash monitor, 1-camera system shall be provided. A rear back-up color camera with 130 deg viewing angle shall be provided. Camera to have automatic activation when the unit is switched to reverse.

SEWER TOOLS AND ACCESSORIES

One (1) 30 Sand Nozzle
One (1) 30 deg. Sanitary Nozzle
One (1) 15 deg. Penetrator Nozzle
One (1) 1" Small finned nozzle pipe skid

VACUUM TOOLS AND ACCESSORIES

The basic vacuum tube package shall include the following:
One (1) 8" x 3' aluminum pipe
Two (2) 8" x 5' aluminum pipe
One (1) 8" x 6'6" catch basin tube
Four (4) 8" quick clamps

CHASSIS EQUIPMENT AND STORAGE

Two (2) front tow hooks shall be provided.
Two (2) rear tow hooks shall be provided.
Two (2) safety cone storage rack shall be provided to contain safety cones in the upright position.
Aluminum Toolbox - Behind Cab
One (1) 18" x 24" x 24" Aluminum Toolbox Mounted street side shall be provided.
One (1) 48" x 22" x 24" Aluminum Toolbox Mounted curb side shall be provided.
One (1) 18 In. x 16 In. x 12 In. Aluminum Toolbox - Front Bumper shall be provided.
Four (4) Long Handle Tool Storage Locations Behind Cab shall be provided

MODULE FINISH

Painting of the module shall be with a DuPont Imron Elite Polyurethane Enamel Top

Coat. Application is to be a wet top coat applied to a wet unsanded primer base. Painted Blue.

CHASSIS SPECIFICATION

The unit shall be mounted on chassis provided by the Warwick Sewer Authority.

ADDITIONAL PARTS

Three (3) 8" x 3' Aluminum Vacuum Tube
Three (3) 8" x 5' Aluminum Vacuum Tube
Six (6) 8" Quick Clamp Assembly
One (1) 1" - 80 GPM @ 2500 PSI - 15 DEG Sand Nozzle
One (1) 1" - 80 GPM @ 2500 PSI - 30 DEG Sanitary Nozzle

CITY OF WARWICK

BID AND CONTRACT FORM

TITLE OF SPECIFICATION:

Bid #2016-100 Purchase and Deliver (1) 2015 Combination Single Engine Sewer and Catch Basin Cleaner.

I. BID:

WHEREAS, the CITY OF WARWICK has duly asked for bids for performance of services and/or supply of goods in accordance with the above-indicated specifications.

The person or entity below does irrevocably offer to perform the services and/or furnish the goods in accordance with the specifications which are hereby incorporated by reference in exchange for the bid price below;

This offer shall remain open and irrevocable until the CITY OF WARWICK has accepted this bid or another bid on the specifications or abandoned the project.

The bidder agrees that acceptance below by the CITY OF WARWICK shall transform the bid into a contract. This bid and contract shall be secured by Bonds, if required by the specifications.

Pricing as Follows

Description	Bid
I. Combination Single Engine Sewer and Catch Basin Cleaner.	
Year	
Make	
Model	
Warranty	
TOTAL COST FOR 1 VEHICLE	***$***
Delivery in Calendar Days	

Additional fees (if applicable)

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